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14 August 1973

NASA Lyndon B. Johnson Space Center
Earth Observations Division
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Subject: Contract NAS9-13304 Monthly Progress Report for the Period
of 1 July - 31 July, 1973.

General

Efforts this period have been devoted to obtaining "quick-look" data
from SL-2, planning for SL-3 and continuing with the development of mathe-
matical models for processing of S-193 radar altimeter data.

Problem Areas

No significant problem areas were encountered this period.

Investigation Results

An analysis of ten (10) seconds of Mode I altitude data from EREP Pass
four resulted in a standard deviation of about 7.5 nanoseconds for the
altimeter output. This standard deviation of the altitude data translates
into approximately 12 nanoseconds jitter in the tracker loop which compares
favorably with GE's breadboard test results. The 12 nanosecond jitter standard
deviation indicates that realignment of the Sample and Hold gates will not be
necessary when determining the mean return pulse. A "quick-look" at the mean
return pulse shape from EREP pass four, Mode I indicates an antenna pointing
angle of 0.5 to 0.7 degrees off nadir.

Initial data processing algorithms were passed to NASA-Wallops Station
personnel for computer programming.

Next Period Efforts

We will continue to reduce the available "quick-look" data in order to
determine their impact on processing models we are currently developing.
Major efforts which remain are waveform reconstruction and σ^0 determination.

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Unclas
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(E73-10917) [ACQUISITION OF QUICK-LOOK

DATA FROM SL-2] Monthly Progress

Report, 1-31 Jul. 1973 (Research Triangle

Inst.) 2 p HC \$3.00

CSCI 05B

Travel Summary and Plans

On 17-19 July, Dr. Brown traveled to Houston (NASA-JSC) to obtain "quick-look" data from SL-2. On 25-27 July, Dr. Brown traveled to Wallops Island (NASA-WS) to coordinate data processing efforts and to participate in the S-193 planning for SL-3.

No trips are scheduled for the next period.

Financial Management Report

A financial report for this period is included as Appendix A.

for Larry S. Brown, Co-Investigator
Lee S. Miller, Ph.D.
Principal Investigator

LSM/dc